

### Amendments to the Claims

1. (Currently Amended) A method for producing chitosan from fungal biomass, comprising:  
reacting the fungal biomass with a caustic at a pressure greater than 0 PSIG for at least 4 hours, thereby producing chitosan.
2. (Original) The method according to claim 1, further comprising separating the chitosan from the reaction.
3. (Original) The method according to claim 1, wherein the pressure is greater than 5 psig.
4. (Original) The method according to claim 1, wherein the pressure is greater than 10 psig.
5. (Original) The method according to claim 1, wherein the temperature is greater than 115°C.
6. (Original) The method according to claim 1, wherein the temperature is greater than 125°C.
7. (Currently Amended) The method according to claim 1, wherein the reaction occurs for ~~least 1 hour~~ greater than 15 hours.
8. – 10. (Canceled)
11. (New) The method according to claim 1, wherein the caustic is 5% to 40% by weight.
12. (New) The method according to claim 1, wherein the caustic is 15% to 30% by weight.
13. (New) The method according to claim 1, wherein the reaction occurs for greater than 6 hours.
14. (New) The method according to claim 1, wherein the reaction occurs for greater than 10 hours.

15. (New) The method according to claim 1, wherein the pressure is greater than 15 PSIG.

16. (New) The method according to claim 1, wherein the pressure is greater than 20 PSIG.

17. (New) A method for producing chitosan from fungal biomass, comprising:

reacting the fungal biomass with a caustic at a pressure greater than 0 PSIG at a temperature greater than 125°C for at least 1 hour, thereby producing chitosan.

18. (New) The method according to claim 17, wherein the reaction occurs for 1 - 50 hours.